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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,884	11/30/2000	Hikmet Senay	36287-00101	1467

7590 09/24/2004

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EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT PAPER NUMBER

3623

DATE MAILED: 09/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,884

Applicant(s)

SENAY ET AL.

Examiner

Akiba K Robinson-Boyce

Art Unit

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NW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Due to communications filed 5/20/04, the following is a non-final office action. Claims 1 and 17 have been amended. Claims 1-17 are pending in this application and have been examined on the merits. The previous rejection has been withdrawn and the following reflects the claims as amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2-5, 10-13, 15, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al (US Patent 6,014,647), and further in view of Johnson et al (US Patent 5,964,839).

As per claim 1, Nizzari et al discloses:

Collecting interaction data, (Col. 9, lines 38-40, [accessing information related to interactions]);

Computer processing said collected interaction data with connectivity and diversity measures, (Col. 9, lines 41-49, lines 52-60, [storing and retrieving the personalized information in the interaction database and interacting with the customer

according to the information retrieved from the database, where connectivity is represented by the communication occurring over a telephone channel and diversity is represented by the communication occurring over a data channel where the data channel is a data network]);

Displaying said processed interaction data and appropriate raw interaction data for interaction analyses, (Col. 9, lines 50-51, [presenting the customer information to the operator]).

Nizzari et al fails to disclose wherein connectivity is a measure for assessing how well entities are connected to their environments and diversity is a measure for assessing how diverse entities are in their interactions with or connections to their environment, but does disclose the processing of how a customer interacts with a connection to a telephone channel in col. 9, lines 52-54, and the processing of how a customer interacts with a data channel in col. 9, lines 55-57, which is diverse from the telephone connection.

However, Johnson et al discloses:

wherein connectivity is a measure for assessing how well entities are connected to their environments and diversity is a measure for assessing how diverse entities are in their interactions with or connections to their environment, (Abstract, lines 12-16, [shows a connectivity monitor that monitors the connectivity data or the bi-directional data stream between software modules and the operating system], w/ abstract, lines 30-34, [shows that connectivity data monitoring includes data packets sent, bytes sent, data packets received, and bytes received. In this case, these measurements

represent both connectivity and diversity according to the applicant's definition since data packets/bytes sent versus data packets/bytes received during a data stream connection has the ability to tell a user how well connected, or how diverse the connection is)). Johnson et al discloses this limitation in an analogous art for the purpose of showing that all inbound/outbound information activity a communication activity can be monitored.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for connectivity to be a measure for assessing how well entities are connected to their environments and diversity to be a measure for assessing how diverse entities are in their interactions with or connections to their environment with the motivation of determining how well an entity connection is.

As per claim 2, Nizzari et al fails to disclose: Wherein said collecting interaction data comprises use of network surveys. Nizzari et al would have collected data comprising the use of network surveys with the motivation of easily accessing customer interaction data.

However Johnson et al discloses: Wherein said collecting interaction data comprises use of network surveys in Col. 1, line 55-Col. 2, line 7 in an analogous art for the purpose of accumulating data regarding customers.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise use of network surveys because surveys are conventional, traditional and effective methods for collecting data. A survey allows information to be comprehensively viewed or considered. Incorporating Johnson et

al's network survey into Nizzari et al would show that a survey could be used to easily access customer interaction data.

As per claim 3, Nizzari et al fails to disclose: Monitoring e-mail traffic. Nizzari et al would have monitored e-mail traffic with the motivation of accessing customer interaction with the e-mail network.

However Johnson et al discloses Monitoring e-mail traffic in Col.2, lines 53-65 in an analogous art for the purpose of collecting user interaction data.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise monitoring e-mail traffic because the e-mail system is a conventional and common form of data communication in a network. By monitoring e-mail, one can effectively obtain a great amount of data on a consistent basis. Incorporating monitoring e-mail traffic from Johnson et al into Nizzari et al would show that collecting and analyzing e-mail data could be used to determine customer interaction data.

As per claim 4, Nizzari et al fails to disclose Monitoring of telephone traffic. Nizzari et al would have monitored telephone traffic with the motivation of accessing customer interaction with a telephone network.

However Johnson et al discloses Monitoring of telephone traffic in Col. 1, lines 24-29 in an analogous art for the purpose of collecting user interaction data.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise monitoring of telephone traffic because the telephone system is a conventional and common form of data communication. By monitoring a

telephone system, one can effectively obtain a great amount of data on a consistent basis. Incorporating monitoring telephone traffic from Johnson et al into Nizzari et al would show that collecting and analyzing telephone traffic data can be used to determine customer interaction data.

As per claim 5, Nizzari et al fails to disclose Monitoring of access to shared resources. Nizzari et al would have monitored access to shared resources with the motivation of accessing customer interaction in a shared resource network environment.

However Johnson et al discloses Monitoring of access to shared resources in Col. 6, lines 23-34 in an analogous art for the purpose of collecting user interaction data.

It would have been obvious to one of ordinary skill in the art for the collection of interaction data to comprise monitoring of shared resource data because in a shared resource network, information and data is constantly being used by different sources. Information from these sources can supply a great amount of data on a consistent basis. Incorporating monitoring shared resource data from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction with those resources.

As per claim 10, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating an organization view. Nizzari et al would have generated an organization view with the motivation of accessing customer interaction throughout an entire organization.

However, Johnson et al discloses Wherein said displaying said processed interaction data comprises generating an organization view in Col.12, lines 32-41 in an analogous art for the purpose of collecting and monitoring customer interaction data amongst a plurality of users.

It would have been obvious to one of ordinary skill in the art to generate an organization view with the motivation of producing a visual representation that shows interactions amongst members of an organization. Incorporating the generation of the organizational view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction amongst a plurality of users in an organization.

As per claim 11, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating a group view. Nizzari et al would have generated a group view with the motivation of using the customer interaction data to visually show the data for an entire group.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating a group view in Col.12, lines 32-41 and Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data amongst a plurality of users.

It would have been obvious to one of ordinary skill in the art to generate a group view with the motivation of producing a visual representation that shows interactions amongst members of a particular group. Incorporating the generation of the group view from Johnson et al into Nizzari et al would show that collecting and analyzing

shared resource data can be used to determine customer interaction amongst a plurality of users in a group.

As per claim 12, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating an individual view. Nizzari et al would have generated a group view with the motivation of using the customer interaction data to visually show the data for an individual user.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating an individual view in Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data for an individual user.

It would have been obvious to one of ordinary skill in the art to generate an individual view with the motivation of producing a visual representation that shows interactions for an individual user. Incorporating the generation of the individual view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction for an individual user.

As per claim 13, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating a cluster view. Nizzari et al would have generated a cluster view with the motivation of using the customer interaction data to visually show the data for a particular cluster.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating a cluster view in Col.12, lines 32-41 and Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer

interaction data for a particular cluster.

It would have been obvious to one of ordinary skill in the art to generate a cluster view with the motivation of producing a visual representation that shows interactions for a particular cluster. Incorporating the generation of the cluster view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction for a particular cluster.

As per claim 15, Nizzari et al fails to disclose Wherein said displaying said processed interaction data comprises generating a topical view. Nizzari et al would have generated a topical view with the motivation of using the customer interaction data to visually show the data for a particular area of interest.

However Johnson et al discloses Wherein said displaying said processed interaction data comprises generating a topical view in Col. 13, lines 46-53 in an analogous art for the purpose of collecting and monitoring customer interaction data for a particular area of interest.

It would have been obvious to one of ordinary skill in the art to generate a cluster view with the motivation of producing a visual representation that shows interactions for a particular cluster. Incorporating the generation of the cluster view from Johnson et al into Nizzari et al would show that collecting and analyzing shared resource data can be used to determine customer interaction for a particular cluster.

As per claim 16, Nizzari et al discloses:

Generating a report based on results o the interaction analysis, (Col. 5, lines 8-14, [summary of recent interactions]).

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As per claim 17, Nizzari et al discloses:

A computer, (Col. 3, lines 46-50, [online computer application]);

A database electronically coupled to said computer for storing interaction data, auxiliary information and any additional data derived from said interaction data, (Abstract, lines 3-6, [interaction database], Col. 4, line 66-Col. 5, line 6, lines 24-27, Fig. 2, [shows that application 210, {which can include a module of an online application} is coupled to and provides information to the interaction tracking database 232);

A set of programs for accessing interaction data and generating views dynamically, (Col. 5, line 5, lines 11-14, [retrieval service module 220 is shown to access information and provide it to the application which can be an online application {eg. Web Browser that can display the information})).

A display screen electronically coupled to said computer for providing a user interface, said user interface providing appropriate controls for displaying and interactively manipulating each generated view, (Col. 1, lines 16-18, [computer screen]);

A user input device electronically coupled to said computer, (Col. 3, lines 43-46, [keypad]);

A user selectable element of said user interface being responsive to user input via said user input device to generate a report based on analysis results, (Col. 3, lines 43-46, [shows account information is received via manual input], Col. 5, lines 8-11, [requesting a summary where the summary includes customer account information

and represents the report]).

Nizzari et al fails to disclose wherein connectivity is a measure for assessing how well entities are connected to their environments and diversity is a measure for assessing how diverse entities are in their interactions with or connections to their environment, but does disclose the processing of how a customer interacts with a connection to a telephone channel in col. 9, lines 52-54, and the processing of how a customer interacts with a data channel in col. 9, lines 55-57, which is diverse from the telephone connection.

However, Johnson et al discloses:

wherein connectivity is a measure for assessing how well entities are connected to their environments and diversity is a measure for assessing how diverse entities are in their interactions with or connections to their environment, (Abstract, lines 12-16, [shows a connectivity monitor that monitors the connectivity data or the bi-directional data stream between software modules and the operating system], w/ abstract, lines 30-34, [shows that connectivity data monitoring includes data packets sent, bytes sent, data packets received, and bytes received. In this case, these measurements represent both connectivity and diversity according to the applicant's definition since data packets/bytes sent versus data packets/bytes received during a data stream connection has the ability to tell a user how well connected, or how diverse the connection is]). Johnson et al discloses this limitation in an analogous art for the purpose of showing that all inbound/outbound information activity a communication activity can be monitored.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for connectivity to be a measure for assessing how well entities are connected to their environments and diversity to be a measure for assessing how diverse entities are in their interactions with or connections to their environment with the motivation of determining how well an entity connection is.

The following is inherent with Nizzari et al's system because Nizzari et al discloses that the system is implemented on a computer which, according to Merriam Webster's Dictionary is a programmable electronic device that can store, retrieve, and process data. In order to process the data, a microprocessor is needed and in order to store the data, a storage unit is needed:

having a microprocessor and a storage unit

The following is also inherent with Nizzari et al since Nizzari et al discloses that the system is implemented on a computer and in order for the computer to utilize a step by step procedure to properly process the information, the system would need the following:

Algorithms stored in said storage unit and operable by said microprocessor for measuring connectivity and diversity of entities based on their interactions.

4. Claims 6, 8, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al (US Patent 6,014,647), and further in view of Johnson et al (US Patent 5,964,839), and further in view of Herz (US Patent 6,029,195).

As per claims 6, 8, both Nizzari et al and Johnson et al fail to disclose wherein said connectivity/diversity measure is a recursive mathematical algorithm that employs

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a decay factor to account for the effects of indirect interactions among entities. Nizzari et al would have utilized a recursive mathematical algorithm with the motivation of calculating interaction data for customers of the system.

However Herz discloses Wherein said connectivity/diversity measure is a recursive mathematical algorithm that employs a decay factor to account for the effects of indirect interactions among entities in Col. 60, lines 49-52 in an analogous art for the purpose of calculating how much files are accessed by multiplying by a decay factor.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate the decay factor of Herz into Nizzari's system with the motivation of determining the rate that interactions are decreasing with respect to customer interactions.

As per claim 14, both Nizzari et al and Johnson et al fail to disclose wherein displaying said processed interaction data comprises generating a people map where said connectivity and diversity measures for predefined units are represented graphically. Nizzari et al would have generated a people map with the motivation of using the customer interaction data to visually represent the data for a people in the system in map view.

However Herz discloses Wherein displaying said processed interaction data comprises generating a people map where said connectivity and diversity measures for predefined units are represented graphically in col. 8, lines 39-47 in an analogous art for the purpose of predicting the information consumption patterns of a user.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to incorporate the people map of Herz into Nizzari et al with the motivation of using the people map to visually represent customer interaction data.

5. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nizzari et al (US Patent 6,014,647), and further in view of Johnson et al (US Patent 5,964,839), and further in view of applicant's admissions.

As per claim 7, neither Nizzari et al or Johnson et al disclose the specific formula:

Wherein said connectivity measure employs the following mathematical formula...Where $C(E, L)$ denotes connectivity of entity E at depth L where E has N direct interactions, $w(k)$ is the weight of direct interactions from k, and fd is the decay factor, but Nizzari et al does disclose a method for processing transaction data to provide easy access to customer interaction information in the abstract, lines 1-3.

However, applicant's admissions discloses:

Wherein said connectivity measure employs the following mathematical formula...Where $C(E, L)$ denotes connectivity of entity E at depth L where E has N direct interactions, $w(k)$ is the weight of direct interactions from k, and fd is the decay factor, (Page 5 of the specification, line 19-Page 6 of the specification, line 4).

Applicant's admissions disclose this limitation for the purpose of showing a general formulation of measuring connectivity.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize connectivity formulas with the motivation of determining or estimating the user's interest and successfully analyzing the user's interaction.

As per claim 9, neither Nizzari et al or Johnson et al, disclose the specific formula:

Wherein said diversity measure employs the following mathematical formula...Where, $D(E, L)$ denotes diversity of entity E at depth L where E has N direct interactions, and $v(k, p) = 0$ if the property of k along the diversity dimension of interest is already within p , where p is a set of properties encountered so far, including the property of E or otherwise, $v(k, p) = 1$, but Nizzari et al does disclose a method for processing transaction data to provide easy access to customer interaction information in the abstract, lines 1-3.

However, applicant's admissions discloses:

Wherein said diversity measure employs the following mathematical formula...Where, $D(E, L)$ denotes diversity of entity E at depth L where E has N direct interactions, and $v(k, p) = 0$ if the property of k along the diversity dimension of interest is already within p , where p is a set of properties encountered so far, including the property of E or otherwise, $v(k, p) = 1$. (Page 6 of the specification, line 16-Page 7 of the specification, line 2). Applicant's admissions disclose this limitation for the purpose of showing a general formulation of measuring diversity.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to utilize diversity formulas with the motivation of determining or estimating the user's interest and successfully analyzing the user's interaction.

Response to Arguments

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6. Applicant's arguments filed 5/20/04 have been fully considered but they are not persuasive.

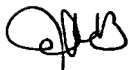
As per claim 1, the applicant argues that Nizzari does not disclose or suggest the claimed connectivity and diversity measures, wherein connectivity is a measure for assessing how well entities are connected to their environments and diversity is a measure for assessing how diverse entities are in their interactions with or connection to their environment. However, claims 1 and 17 were amended to include that the connectivity is a measure for assessing how well entities are connected to their environments and diversity is a measure for assessing how diverse entities are in their interactions with or connection to their environment, and as amended, the combination of Nizzari and Johnson et al discloses this limitation. As described in the rejection, Johnson et al discloses a connectivity monitor that monitors the connectivity data or the bi-directional data stream between software modules and the operating system in the Abstract, lines 12-16. In addition, the abstract lines 30-34 of Johnson et al, shows that connectivity data monitoring includes data packets sent, bytes sent, data packets received, and bytes received. In this case, these measurements represent both connectivity and diversity according to the applicant's definition since data packets/bytes sent versus data packets/bytes received during a data stream connection has the ability to tell a user how well connected, or how diverse the connection is. Therefore, the combination of Nizzari et al and Johnson et al teach the limitations of claims 1 and 17 as amended, and all claims that depend therefrom.

Conclusion

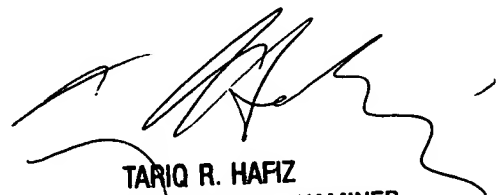
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 703-305-1340. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7238 [After final communications, labeled "Box AF"], 703-746-7239 [Official Communications], and 703-746-7150 [Informal/Draft Communications, labeled "PROPOSED" or "DRAFT"].

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.



A. R. B.
September 20, 2004



TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600